

UNIPOLAR ELECTRICAL TO BIPOLAR OPTICAL CONVERTER

ABSTRACT OF THE INVENTION

An optical amplitude modulator (16) has a first input (13) for receiving a continuous optical signal, a second input (17) for receiving a bipolar data encoded electrical signal, and a Mach-Zehnder interferometer transfer biased at V_π for modulating the continuous signal based on the bipolar data encoded electrical signal for generating an AMI modulated optical signal having three electric field levels, $+/-E$ and 0, and two power levels, 0 and P, such that the resultant modulated signal is both amplitude and phase modulated.